

REMARKS

In view of the foregoing amendments and the following remarks, reconsideration of the present patent application is respectfully requested. In the independent claims, Claim 1 is amended to recite the term "seal" for further highlighting the hermeticity of the buffer layer with respect to the electronic device. Claims 22 and 23 are amended in the same manner. Claim 25 is amended with the term "edges" in place of the term "corner". Claim 26 is recited by limiting the formation of the buffer layer so that the efficacy of self-planarization can be highlighted. With the amended independent claims, the present invention can be further distinguishable from the reference US2005/0056946, which will be explained below. In addition, Claim 7 is amended according to the specification. Claim 8 is amended to remove a clerical error existing therein. All of the amendments can be supported by the specification of the present invention, and, therefore, no new matter is introduced.

The following will be dedicated to address claim rejections based on 35 USC § 112 and 35 USC § 103(a).

Rejection under 35 USC § 112

The Examiner rejects Claim 7 under 35 USC § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the amended claims, Claim 7 has placed the limitation of the conductive layer as being formed on the electronic device and the buffer layer. As such, the issue with respect to Claim 7 has been overcome.

Rejection under 35 USC § 103(a)

The Examiner rejects Claims 1-3, 7-9, and 22-26 under 35 USC § 103(a) as being unpatentable over the US Patent Publication US2005/0056946 to Gilleo in view of Prior Art figures 1A-1F of the present application. The Applicant respectfully disagrees since there

are some significant features in the claims of the present application quite distinctive over the above references.

In the '946 case, the at least one adhesive body is positioned between the integrated circuit (IC) device and the substrate so that a mechanical connection is formed therebetween. There is no recitation in this case teaching the purpose and efficacies with respect to hermeticity and self-planarization of the electronic device. Therefore, the object of the present invention is different from that of the '946 case.

In the '946 case, the adhesive body is fed to the position between the IC device and substrate by a gravity feed mechanism or a jetting mechanism (feeding mechanism in this document), as contrast to the present invention where the buffer layer is formed by being pressed by the electronic device in a thermoplastic process. Therefore, the formation of the present invention is totally different from that of the '946 case. In addition, the formation of the adhesive body in the '946 case requires the feeding mechanism, which is apparently complicated and not cost efficient as the formation of the buffer layer in the present invention. Although the significant difference of the formations of the adhesive body and the buffer layer is not the most critical point in determining whether the present invention is provided with nonobviousness, it can lead to the other features of the present invention which are deemed distinguishable from the '946 case.

In the '946 case, since the adhesive body is reflowed and thus formed between the IC device and the substrate with the aid of the feeding mechanism, the adhesive body has not two portions provided with different densities. However, the present buffer layer has two different density equipped portions expressly defined in some of the independent claims, which is not taught by the '946 case. Therefore, the present invention is distinguishable from the '946 case in the structural view. Further, this density issue may directly relate to the purpose of hermeticity of the electronic device.

In the '946 case, the adhesive body has unavoidably some air gaps therein since it is merely fed and provided by the feeding mechanism without any other additional process involved therewith. However, the buffer layer in the present invention may be pressed downwardly by the electronic device in, for example, a thermocompression process and thus can provide a good sealing effect for the electronic device so that the ambient moisture can be prevented from entering therein. Apparently, the '946 case does not achieve the hermeticity of the IC device and teach in no way the present invention. Therefore, this efficacy of the present invention is distinguishable from that of the present invention.

In the '946 case, the adhesive body can not provide any self-planarization function with respect to the electronic device, since whether the electronic device is planarly positioned is only determined by the solder spheres and the adhesive body is not involved in the placement of the electronic device. However, this is not the case in the present invention, where the placement of the electronic device is determined by the thermoplastic buffer layer located at its lower surface. Therefore, this efficacy of the present invention is distinguishable from that of the '946 case.

The above features discussed in the aspects of object, formation, density and efficacies of the buffer layer of the present invention have been defined in the claims. In this regard, the nonobviousness issue of the present invention is well demonstrated.

Based on the above comparisons and analyses, it is apparent that the present invention is very distinguishable from the cited reference. Thus, it is unobvious for the skilled person to make such an invention. For the foregoing reasons, it is respectfully submitted that the cited reference does not disclose, suggest, or render obvious the claimed invention. Accordingly, the claims should be deemed as being patentable over the cited reference without prejudice.

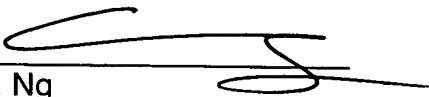
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Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0665, under Order No. 386998035US from which the undersigned is authorized to draw.

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